

both directions.²⁹ In the following sections, we elaborate on the relevant product and geographic markets.

A. Mass-Market Broadband Services Constitute a Relevant Product Market

1. The Product Market

32. Under the 1992 *Merger Guidelines*, used by the FCC to define product markets, a set of services represents a distinct product market if a hypothetical monopoly provider of those services could profitably sustain a nontransitory, nontrivial price increase—that is, if the monopolist’s profits after the price increase would exceed the monopolist’s profits before the price increase.³⁰ If the price increase caused enough buyers to shift their purchases to a second product to render the increase unprofitable, then the second product should be considered to be part of the same product market.

33. There is broad consensus that all mass-market broadband services, which are used almost exclusively to access Internet service providers and the Internet, are in the same product market. In fact, the FCC, the Department of Justice,³¹ the Federal Trade Commission,³² and academicians³³ have all previously so concluded.³⁴ For example, in the *First Advanced Services Report*, the Commission stated in 1999:

29. See *SBC/Ameritech Merger Order*, *supra* note 1, App. C, Merger Conditions at 1, ¶ 2.

30. 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, at 20,572 § 1.0 (defining the relevant product market as “a product or group of products such that a hypothetical profit maximizing firm that was the only present and future seller of those products (‘monopolist’) likely would impose at least a ‘small but significant and nontransitory’ increase in price.”).

31. Competitive Impact Statement at 9, *United States v. AT&T Corp.*, Civil No. 00-CV-1176 (D.D.C. filed May 25, 2000) (“A relevant product market affected by [the AT&T/MediaOne] transaction is the market for aggregation, promotion, and distribution of broadband content and services.”).

32. Complaint, *AOL, Inc. v. Time Warner, Inc.*, Docket No. C-3989 (FTC filed Dec. 14, 2000) at ¶ 21 (“The relevant product market in which to assess the effects of the proposed merger is the provision of residential broadband internet access service.”).

33. See Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer, *Cable Modems and DSL: Broadband Internet Access for Residential Customers*, 91 AM. ECON. ASS’N PAPERS & PROC. 302 (2001) [hereinafter Hausman, Sidak & Singer, *Cable Modems and DSL*]; Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer,

[W]e see the potential for [the consumer broadband] market to accommodate different technologies such as DSL, cable modems, utility fiber to the home, satellite and terrestrial radio. The fact that different companies are using different technologies to bring broadband to residential consumers and that each existing broadband technology has advantages and disadvantages as a means of delivery to millions of customers opens the possibility of intermodal competition, like that between trucks, trains, and planes in transportation.³⁵

Likewise, in the *Fixed Wireless Competition Order*, the Commission found this year that “DSL technologies remain the most significant competitors to Internet over cable.”³⁶ In the *AOL/Time Warner Merger Order*, the Commission concluded that high-speed Internet access services constitute the relevant product market in determining the effects of the proposed merger on the public interest.³⁷ The Commission also concluded that “[t]he main competitor to cable in the market for residential high-speed Internet services is currently DSL[.]”³⁸

Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers, 18 YALE J. ON REG. 129 (2001) [hereinafter Hausman, Sidak & Singer, *Residential Demand for Broadband*].

34. As explained by Hausman, Sidak, and Singer, broadband access to the Internet represents a discrete product market, separate from the market for narrowband, dial-up Internet access because, among other things, many of the services supported by broadband connections are not available through narrowband connections, and the demand for applications that can be supported only by high-bandwidth connections strongly suggests that the product markets for narrowband and broadband access are distinct. Moreover, empirical research shows that narrowband Internet access prices (including the access charge plus the price of a second telephone line) do not constrain broadband Internet access prices. See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and American Online, Inc., Transferors, to AOL Time Warner Inc., Transferee, CS Dkt. No. 00-30, 16 F.C.C. Rcd. 6547, ¶ 71 (2001) (citing Declaration of Jerry A. Hausman, Attached to the Comments of America Online, Application for Consent to Transfer TCI to AT&T, CS Dkt. No. 98-178, at ¶¶ 4-10; Declaration of Daniel Rubinfeld and J. Gregory Sidak, Attached to the Comments of GTE, Application for Consent to Transfer Control of MediaOne to AT&T, at 8) [hereinafter *AOL/Time Warner Order*]; Hausman, Sidak & Singer, *Cable Modems and DSL*, *supra* note 33; Hausman, Sidak & Singer, *Residential Demand for Broadband*, *supra* note 33.

35. Inquiry Concerning the Deployment of Advanced Telecommunications Capability, Report, 14 FCC Rcd 2398, 2423-24 (1999). In that same report, the FCC noted that “whether a capability is broadband does not depend on the use of any particular technology or the nature of the provider.” *Id.* at 2407.

36. Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Dkt. No. 00-132, 16 F.C.C. Rcd. 6005, at ¶ 51 (2001). See also Broadband Today, FCC Staff Report (Oct. 1999) at 42 (“[A]s deployment of DSL, satellite, and wireless advances, in large part spurred by rapid cable modem deployment, consumers will have alternative platforms to use for high-speed data access[.]”).

37. See *AOL/Time Warner Order*, *supra* note 34. Although the Commission suggested that its finding that residential high-speed Internet access services constitute a discrete product market might be limited to the specific context in which the issue had been raised, *id.* at n.202, we are not aware of any basis upon which application of the 1992 *Merger Guidelines* could yield different product market definitions in different

34. The findings of the FCC, the DOJ, the FTC, and academicians that all mass-market broadband Internet access services are in the same product market are correct. Absent a quantitative determination of whether two services are part of the same product market, courts have generally included products in the same market if they are “reasonably interchangeable” in their use.³⁹

35. Applying this standard leaves no doubt that all mass-market broadband Internet access services, including, most importantly, DSL and cable modem service, are part of the same product market. First, from a functional standpoint the services are substantially similar. The predominant use of such services by the mass market is to obtain high-speed access to Internet service providers and the Internet. Broadband services permit consumers to navigate the web on a far more efficient basis than dial-up Internet access, and they provide consumers with access to a host of features that require high bandwidth, including real-time video programming, on-demand video, customized music and video libraries, real-time radio programming, interactive multi-player gaming, and high-speed telecommuting. According to surveys conducted by ZDNet and the Yankee Group, the high bandwidth common to all broadband services is clearly the principal determinant of consumer decisions to purchase broadband service.⁴⁰ Other common

proceedings. In any event, the Commission has never, formally or informally, deviated from the view that broadband Internet access services constitute a discrete product market. To the contrary, the Commission has in numerous other contexts treated the broadband Internet access market as a discrete product market. See note 55, *infra* (presenting market shares for “high-speed services for Internet access.”).

38. *Id.* at ¶ 65.

39. *Brown Shoe Co. v. United States*, 370 US 294, 325 (1962); ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 200 (3d ed. 1992).

40. See, e.g., *ZDNet Study Suggests Broadband Adoption Will Be Drive by Increasing Demand for Access to Music, Video, and Games*, PR NEWswire, June 29, 1999 (63 percent of respondents were interested in broadband due to desire to download more audio, video, or game files, while 54 percent were motivated by a desire to enjoy streaming audio or video); JP MORGAN H&Q/MCKINSEY & COMPANY, BROADBAND 2001: A COMPREHENSIVE ANALYSIS OF DEMAND, SUPPLY, ECONOMICS, AND INDUSTRY DYNAMICS IN THE U.S. BROADBAND MARKET, Apr. 2, 2001, at 29 [hereinafter JP MORGAN BROADBAND] (finding that, for most broadband users, the most appealing aspect of the service is its speed); YANKEE GROUP,

attributes of mass-market broadband services include the fact that they are “always on” and do not require consumers to log on each time they want to use the Internet. In addition, unlike dial-up Internet access, broadband services do not use the voice frequency of the subscriber’s telephone line, thus enabling a subscriber to access the Internet and use his telephone at the same time, without having to purchase a second telephone line. These qualities, as well, are invariably cited by broadband subscribers as significant attributes of the service.⁴¹

36. Second, consumers view these services as substitutes for each other. A recent Harris Interactive Consumer TechPoll of more than 69,000 Internet users found that “subscribers saw little difference between DSL and cable modem services.”⁴² Echoing this conclusion, a survey jointly conducted by the Yankee Group and the Satellite Broadcasting and Communications Association found that nearly half of all of those surveyed who were interested in a broadband connection had no preference as between DSL, cable, or satellite service.⁴³

37. Third, providers of mass-market broadband services perceive themselves as competitors. For example, AT&T promotes its cable modem service to both business and residential customers as a competitor to DSL.⁴⁴ According to Comcast’s 2001 Form 10-K filing with the Securities and Exchange Commission, Comcast considers DSL to be its most important competitor in the provision of broadband services:

RESIDENTIAL BROADBAND: CABLE MODEMS AND DSL REACH CRITICAL MASS, Mar. 2001, at 9 [hereinafter YANKEE GROUP BROADBAND] (most commonly cited reason by consumers for interest in broadband service was their desire for a significantly faster connection to the Internet; next most common reason was being able to use their telephone and access the Internet at the same time).

41. JP MORGAN BROADBAND, *supra* 40; United States General Accounting Office, *Characteristics and Choices of Internet Users*, Feb. 2001, p. 25; YANKEE GROUP BROADBAND, *supra* note 40, at 9.

42. *Cable or DSL? Consumers See Little Difference*, Dec. 1, 2000, at www.Cyberatlas.com.

43. YANKEE GROUP BROADBAND, *supra* note 40, at 10.

44. Applications for Consent to Transfer of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, CC Dkt. No. 99-251, AT&T Reply Comments at 80 (filed Sept. 17, 1999) (calling DSL services “the most obvious competitors of broadband cable modem services”).

Numerous companies, including telephone companies, have introduced DSL service and certain telephone companies are seeking to provide high-speed broadband services without regard to present service boundaries and other regulatory restrictions. We are unable to predict the likelihood of success of competing online services offered by our competitors or what impact these competitive ventures may have on our business and operations.⁴⁵

Similarly, DSL providers mentioned cable modem service as a competitor in the market for broadband services.⁴⁶

38. Fourth, the different broadband platforms that serve consumers are generally priced similarly enough to support their inclusion in the same product market. Indeed, the prices for cable modem access and DSL access appear to move together. According to ARS Broadband Provider Tracking Service, AT&T charged \$39.95 per month for cable modem service from August 2000 through May 2001, raised its prices to \$45.95 in June 2001, and raised its prices once in July 2001 to \$50.61.⁴⁷ In a similar fashion, Verizon charged its DSL customers \$39.95 per month from July 2000 through April 2001, and raised its monthly price to \$49.95 in May 2001.⁴⁸ DirecTV raised the monthly price of its DSL offering in March 2001 from \$43.28 to \$49.95.⁴⁹ The FCC has recognized the similarity in pricing between broadband alternatives.⁵⁰

45. COMCAST CABLE COMMUNICATIONS INC., 2000 SEC FORM 10-K, Mar. 16, 2001, at 6.

46. See, e.g., VERIZON COMMUNICATIONS INC., 2000 SEC FORM 10-K405, Mar. 23, 2001, at 12; BELL SOUTH CORP., 2001 SEC FORM 10-K, Mar. 2, 2001, at 20.

47. Data supplied to SBC Communications by ARS Broadband Provider Tracking Service, Sept. 2001.

48. *Id.*

49. *Id.*

50. See, e.g., Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Dkt. No. 00-132, 16 F.C.C. Rcd. 6005, ¶ 53 (2001) (“[B]oth cable Internet access providers and DSL operators offer services at around the same price[.]”). In a similar fashion, Hausman, Sidak and Singer analyzed price movements of access technologies to show the broadband services were distinct from narrowband services. See Hausman, Sidak & Singer, *Cable Modems and DSL*, *supra* note 33.

39. For all of these reasons, it is clear that mass-market broadband services are “reasonably interchangeable” in use and thus part of a discrete and relevant product market. Indeed, we are unaware of any credible argument to the contrary.⁵¹

40. Although some have argued that broadband services do not comprise a complete product market,⁵² their position has been that the market is *broader* in scope, not that individual broadband services comprise discrete product markets. More specifically, the only debate of which we are aware regarding product market definitions for mass-market broadband Internet access services has centered around the question of whether such services are part of a larger market that also includes narrowband Internet access services.

41. Whether one should include narrowband Internet services in the market is largely academic for present purposes. As we understand SBC’s petition, SBC will not ask the Commission to forbear from regulating its narrowband services. Even assuming, therefore, as some have claimed, that narrowband and broadband Internet access services are part of the same

51. The fact that DSL or cable modem transport may not be sold directly to the mass market by the transport providers, but rather by ISPs who bundle the transport with their Internet access, is irrelevant to this analysis of the product market. If one can demonstrate that a vertically integrated DSL provider cannot exercise market power in the end-user market, then certainly a vertically disintegrated DSL provider could not exercise market power in the end-user market, or, for that matter, at any stage of the production process. According to Marshall’s rules, the elasticity of demand for inputs is directly related to the elasticity of demand for the end product. Applied here, the pricing of transport is constrained by the price-elasticity of demand for DSL service. See Jerry A. Hausman & J. Gregory Sidak, *A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks*, 109 YALE L. J. 417, 475-77 (1999). For an elaborate discussion of Marshall’s rules, see P.R.G. LAYARD & A.A. WALTERS, MICROECONOMIC THEORY 259 (McGraw-Hill 1978).

52. See, e.g., Applications for Consent to Transfer of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, CC Docket No. 99-251, AT&T Reply Comments at 69, 71-75 (arguing that high-speed and narrowband Internet access services constitute part of the same market); *AOL/Time Warner Order*, *supra* note 34, ¶¶ 68-74 (noting that MediaOne, AT&T, Time Warner, and AOL have argued, in various proceedings, that narrowband and broadband Internet access services constitute a single product market). Ironically, in the *AT&T-TCI* merger proceeding, when it fit AOL’s purposes to do so, AOL argued that broadband access services constituted a separate product market. See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Telecommunications, Inc., Transferor, to AT&T Corp., Transferee, CS Dkt. No. 98-178, Comments of America Online at 16.

product market, consumers would necessarily have a regulated substitute service (narrowband service) available to them even after the detariffing of SBC's broadband service. That regulated alternative would ensure that a substitute service is available at just and reasonable terms, and it would further constrain SBC's ability profitably to raise DSL prices to supracompetitive levels. Any such increase would precipitate a migration of customers to alternative broadband Internet access platforms, and it would precipitate a further migration of customers to narrowband access.

2. The Geographic Market

42. Like long-distance voice traffic, a broadband connection to an Internet service provider "at its most fundamental level, involves a customer making a connection from one specific location to another specific location."⁵³ As with a long-distance voice call, customers do not view broadband connections originating in different locations to be close substitutes for each other.⁵⁴ In this respect, the relevant geographic market for mass-market broadband services is all possible routes that allow for a connection from one particular location to another location (that is, a point-to-point market).⁵⁵

43. But, as the Commission has properly recognized, assessing market power in each individual point-to-point market would be administratively impractical and unnecessary.⁵⁶ There is no credible evidence that there is any particular point-to-point market or group of point-to-point markets in which SBC could exercise market power in the provision of DSL services. There are numerous providers of competitive broadband service. There are more than one dozen

53. See *BOC Classification Order*, *supra* note 11, at 15,792-93 ¶ 64.

54. *Id.*

55. *Id.*

56. *Id.* at 15,794 ¶ 67 ("Unless there is credible evidence suggesting that there is or could be a lack of competition in a particular point-to-point market or group of point-to-point markets, and there is a showing that geographic rate averaging will not sufficiently mitigate the exercise of market power, we will refrain from employing the more burdensome approach of analyzing separate data from each point-to-point market.").

providers of cable modem service, including, among others, AOL Time Warner, AT&T Broadband, Comcast, and Cox Communications.⁵⁷ Moreover, all of the leading providers of cable modem service in SBC's region have upgraded the vast majority of their cable plant so that it is broadband-capable. Indeed, as of June 2001, AOL/Time Warner had upgraded nearly 100 percent of its plant and AT&T had upgraded at least 75 percent.⁵⁸ Comcast will have upgraded at least 80 percent of its plant by the end of 2001, and Charter Communications as much as 90 percent.⁵⁹ Thus, it is likely that a very large percentage of households in SBC's territory have access to cable modem service.

44. That conclusion is supported by two recent analyst reports. One, issued by the Yankee Group, found that, as of year-end 2001, two thirds of all U.S. households will have access to cable modem service and that, by year-end 2002, 77 percent of U.S. households would have access to cable modem service.⁶⁰ Another report, issued jointly by JP Morgan and McKinsey & Co., found even higher addressability: 74 percent of U.S. households at the end of 2000, and an estimated 82 percent at the end of 2001.⁶¹ Finally, the National Cable and

57. According to the FCC's August 9, 2001 report, there at least five providers of cable modem service in each SBC state for which data were released. There were ten providers of cable modem service in California. See *High-Speed Services for Internet Access: Subscriberhip as of December 31, 2000*, Industry Analysis Division, Common Carrier Bureau, FCC, August 2001, at Table 5 [hereinafter *CCB Subscriberhip Analysis*].

58. See JP MORGAN BROADBAND, *supra* note 40, tbl. 6.

59. MediaWeek, *Smooth Operators Upgrading Cable's Big Seven*, June 14, 2001, downloaded from http://dailynews.yahoo.com/h/bpimw/20010614/ad/_b_hl_smooth_operators_upgrading_cable_s_big_seven_hl_b_1.html on June 20, 2001. JP Morgan and McKinsey provide the following data on cable plant upgrades for the year 2000: AT&T 75 percent; AOL Time Warner 100 percent; Comcast 70 percent; Charter 55 percent; Cox 74 percent; Adelphia 60 percent; and Cablevision 73 percent. For the year 2001 (estimated): AT&T 77 percent; AOL Time Warner 100 percent; Comcast 86 percent; Charter 69 percent; Cox 84 percent; Adelphia 76 percent; Cablevision 95 percent. See JP MORGAN BROADBAND, *supra* note 40, tbl. 6.

All of these data on plant upgrades are national in scope. Regional data are unavailable, but there is no reason to believe that the data would be significantly different for SBC's region. If anything, given SBC's aggressive DSL deployment plans, one would expect the pace of cable plant upgrades to be higher than the national average in the SBC region.

60. YANKEE GROUP BROADBAND, *supra* note 40, at 4.

61. JP MORGAN BROADBAND, *supra* note 40, at Table 6.

Television Association reported in September 2001 that 83 percent of all U.S. households would be upgraded for cable modem service by the end of 2001.⁶²

45. Notably, SBC is currently able to offer DSL service to only 50 percent of its customers.⁶³ Nationally, fewer than half of all U.S. households have access to DSL service.⁶⁴ Given that cable penetration in SBC's territory is likely to be at least as high as the national average, there are likely to be very few areas in which SBC offers DSL service but no cable provider offers cable modem service.⁶⁵

46. Even if there are a few such non-overlapping areas, there are alternative broadband platforms in those (and other) areas that compete with SBC's DSL service. For example, despite the recent difficulties encountered by many CLECs, they collectively accounted for about 16 percent of the DSL market in December 2000.⁶⁶ They can lease unbundled loops or the high-frequency portion of a loop anywhere in SBC's territory to provide DSL service. Satellite and fixed wireless broadband services also provide consumers with a broadband alternative. Although wireless technologies still account for a relatively small share of the broadband Internet access market, they are ubiquitously available and growing rapidly. For example, the Strategis Group predicts that the number of U.S. satellite subscribers will grow to more than four million by 2005.⁶⁷ It is reasonable to believe that satellite services could reach those (rare) areas that are served by DSL but not served by cable modems. To be sure, upload

62. Downloaded from National Cable Television Association web site on Sept. 25, 2001 at http://www.ncta.com/industry_overview/indStat.cfm?indOverviewID=2.

63. See SBC Communications, Inc., Strong Growth in Data, Wireless and Long Distance Highlights SBC's First-Quarter Results, Press Release, Apr. 23, 2001, available at http://www.sbc.com/Investor/Financial/Earning_Info/docs/1Q_IB_FINAL.pdf.

64. JP MORGAN BROADBAND, *supra* note 40, at 43, Chart 25.

65. *Id.* at 43, Chart 25 (as of first quarter of 2000, only 10 percent of residential households were addressable by DSL but not cable modem service).

66. ILECs account for about 84 percent of the DSL market nationwide. See COMM. DAILY, Aug. 14, 200,1 at 6 (discussing Telechoice study).

speeds for satellite broadband service are slow. But as Professors Janusz Ordovery and Robert Willig have testified on behalf of AT&T, such concerns are "irrelevant to the vast majority of users who, if they worry about speed at all, are primarily interested in fast download times and do not send significant amounts of information."⁶⁸

47. Irrespective of whether satellite services experience the explosive growth that some predict, it is reasonable to conclude that providers of those services will fill a market niche, focusing their competitive efforts in any areas in which cable modem and/or DSL services are not available. Indeed, satellite broadband providers are likely to be most successful in areas in which cable service is not available, because it is in those areas that consumers are likely to use DBS service for video, and consumers who already use satellite service are likely to be the most receptive to satellite-based Internet access.

48. For customers who cannot obtain cable modem access, fixed-wireless service is another option. Frost & Sullivan project that the number of fixed-wireless broad subscribers will grow from 79,000 at the end of 2000 to over 400,000 at the end of 2001 and to almost one million at the end of 2002.⁶⁹ Even if these predictions prove wrong, fixed-wireless services, at a minimum, can be expected to fill any niche in which competition between DSL and cable modem services is less vigorous.

67. Dan Miller, *Who You Gonna Call for Broadband?*, INDUS. STANDARD, Apr. 30, 2001.

68. Declaration of Janusz A. Ordovery and Robert Willig, attached to AT&T and MediaOne Reply in Applications for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc., Transferor, to AT&T Corporation, Transferee, CC Dkt. No. 99-251, Sept. 17, 1999.

69. FROST & SULLIVAN, NORTH AMERICA BROADBAND WIRELESS ACCESS SERVICES MARKET 2001, at 1-3.

B. Application of the FCC's Four-Part Test to the Mass-Market Broadband Services Market

49. With respect to each of the Commission's criteria, SBC is non-dominant in the mass-market broadband services. In the following section, we find:

50. *First*, SBC's competitors have captured more than 65 percent of the market for mass-market broadband services. Moreover, they are exhibiting faster growth than is SBC.

51. *Second*, customers for DSL services have price-elastic demand. Econometric analysis and customer-level churn data suggest that SBC could not profitably raise prices.

52. *Third*, SBC's competitors have more than enough excess capacity to constrain SBC's pricing determinations. In fact, cable operators alone could likely absorb more than a sufficient number of DSL subscribers to constrain SBC's pricing of DSL transport. Moreover, the pace at which they are upgrading their networks and adding customers demonstrates that they could readily add capacity.

53. *Fourth*, SBC does not have advantages over its competitors in terms of relative size, resources, or cost structure, certainly not advantages that could confer monopoly power. Rather, it appears that SBC's competitors have significant cost and other advantages, including a much more favorable regulatory framework in which to operate.

1. Market Share

54. When the FCC declared AT&T to be non-dominant in "interstate, domestic, interexchange telecommunications services" in late 1995, AT&T's market share was estimated to be 60 percent.⁷⁰ Likewise, AT&T's overall share of the international long-distance services market was estimated to be about 60 percent at the time that the FCC declared AT&T to be non-dominant in those services, and in a number of countries, AT&T's market share was significantly

higher. Its average market share (weighted by revenues) in 76 select countries was 74 percent, and it faced no competition at all in four countries.⁷¹ In contrast, SBC's share of the mass-market broadband services market in its region is about 30 percent—roughly *half* of AT&T's share of the IXC market when the FCC declared AT&T to be non-dominant.⁷²

55. We base this estimate of SBC's market share on numerous sources. First, the Commission's August 9, 2001 report, *High-Speed Services for Internet Access*, estimates the market share of different broadband platforms on a state-by-state basis.⁷³ Data were available for all but four of the SBC states—Oklahoma, Kansas, Arkansas, and Nevada. The results for the remaining nine states in the SBC region appear in Table 1.

TABLE 1: SBC MARKET SHARES BY STATE

State	Cable Lines	ADSL Lines	Other	ADSL Share*	SBC Share**
California	476,544	622,894	287,187	45%	43%
Connecticut	78,234	22,348	11,210	20%	19%
Illinois	126,490	48,278	67,471	20%	19%
Indiana	37,052	6,442	17,000	11%	10%
Kansas	48,541	14,281	5921	21%	20%
Michigan	130,296	25,482	42,452	13%	12%
Missouri	42,255	38,759	19,389	39%	37%
Ohio	121,196	55,046	47,603	25%	24%
Texas	227,070	158,513	136,955	30%	29%
Total	1,287,678	992,043	635,188	34%	32%

Source: See *High-Speed Services for Internet Access: Subscription as of December 31, 2000*, Industry Analysis Division, Common Carrier Bureau, FCC, Aug. 2001, at Table 6.

Notes: * Because the overwhelming majority of SBC's high-speed Internet access lines are ADSL, we use the ADSL deployment data as a proxy for SBC's high speed Internet access lines in service.

** ILECs account for about 84 percent of the DSL market nationwide. See COMM. DAILY, Aug. 14, 2001, at 6 (discussing Telechoice study); IDC, U.S. DSL MARKET SHARES BY VENDOR, Aug. 2001 (Covad, Rhythms, and Broadwing account for 13.4 percent of all DSL lines; Covad accounts for about 10 percent of DSL lines). Although Covad reports that half of its customers are residential, we assume, to be conservative, that only one-third of DLEC DSL lines are ADSL. Therefore, we estimated SBC's market share by multiplying the total ADSL market share in its region by 95 percent.

70. *AT&T Reclassification Order*, *supra* note 16, at 3305 ¶ 62 & n.173.

71. *AT&T International Non-Dominance Order*, *supra* note 18, at 17,978 ¶ 40.

72. Telecommunications Reports International, *TR's Online Census: Free's Not Always Easy*, May 2001 [hereinafter *TR Census*].

73. *CCB Subscription Analysis*, *supra* note 57.

As Table 1 shows, SBC's share of the broadband Internet access market ranged from 10 percent in Indiana to 43 percent in California. The FCC data are largely consistent with data in analyst reports. For example, a survey conducted by Forrester Research in the fourth quarter of 2000 estimated that DSL's share of the broadband Internet access market in SBC's states was 32.4 percent.⁷⁴

56. We also examined DSL's share of the mass-market broadband services market nationwide. According to the FCC's broadband subscribership report released in August 2001, about 28 percent of all high-speed Internet access lines in service as of December 2000 were asymmetric DSL (ADSL) lines.⁷⁵ There were fewer than 2 million ADSL lines, but more than 3.5 million high-speed coaxial cable lines. These data are consistent with national survey data from Telecommunications Reports International, which show DSL's share of the mass-market broadband services market to be 32.4 percent at the end of the first quarter of 2001.⁷⁶ In addition, numerous analyst reports show cable modem service to be far outpacing DSL service.⁷⁷

57. These market share data indicate that SBC is non-dominant in the provision of mass-market broadband services. Although the Commission has correctly recognized that, in certain circumstances, market share data are not necessarily a reliable indicator of market power, it did so in the context of a company (AT&T) that had a large, but declining, market share in an industry characterized by high demand and supply elasticities. In that context, the FCC properly recognized that market share is not necessarily indicative of market power.

74. FORRESTER RESEARCH, CONSUMER TECHNOLOGY MARKET FOCUS SURVEY, at 1 (2000) [hereinafter FORRESTER STUDY].

75. See *CCB Subscribership Analysis*, *supra* note 57, at Table 1.

76. *TR Census*, *supra* note 72.

77. See, e.g., YANKEE GROUP BROADBAND, *supra* note 40, at 1 (DSL share of 31 percent); MORGAN STANLEY DEAN WITTER, TELECOM TREND TRACKER, Aug. 17, 2001 [hereinafter MORGAN STANLEY TELECOM] (DSL share of 38 percent).

58. Although a large market share does not necessarily indicate market power, a low market share usually indicates a lack of market power. That is because firms with low market shares cannot usually affect the price of a product by restricting their output.⁷⁸ Courts will almost never conclude that a firm possesses market power if its market share is less than 40 percent.⁷⁹

59. To be sure, the Commission did not give dispositive weight to the zero market share of the BOC long-distance affiliates in the *BOC Classification Order*. Rather, while recognizing that this market share “suggests that the affiliate will not initially be able to raise prices by restricting output,” the Commission deemed it necessary to address whether the BOC might quickly acquire a high market share after entry into the market.⁸⁰ That decision, however, was made in the context of a BOC entering a new market for the first time. In the present case, in contrast, SBC has been actively competing in the broadband Internet access market for two years. The Commission need not speculate about whether SBC, upon entry or soon thereafter, can acquire market power in broadband services. In two years of making broadband deployment a top company priority,⁸¹ SBC has not come close to doing so.

78. See *BOC Classification Order*, *supra* note 11, at 15,802-03 ¶ 83 (the ability to raise prices by restricting one’s own output “usually requires a large market share.”); *id.* at 96 (“the fact that each BOC interLATA affiliate initially will have zero market share in the provision of in-region, interstate, domestic, interLATA services suggests that the affiliate will not initially be able to raise price by restricting its output”).

79. ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 213-14 (3d ed. 1992); *United States v. Aluminum Co. of America*, 148 F.2d 416, 424 (2d Cir. 1945) (“it is doubtful whether a 60 percent market share would constitute a monopoly, and certainly 33 percent is not”); Landes & Posner, *supra* note 10, at 938, 959.

80. *BOC Classification Order*, *supra* note 11, at 15,811-12 ¶ 97.

81. See SBC Launches \$6 Billion Initiative to Transform it into America’s Largest Single Broadband Provider, Press Release, Oct. 18, 1999, available at <http://webcast.sbc.com/media/news/release.doc> (quoting Edward E. Whitacre, Jr., chairman and chief executive officer of SBC: “We see a rapidly changing marketplace where traditional dialtone is still a staple service, but where millions of our customers will demand the convenience, productivity, availability and reliability of our broadband service—service which we call ‘e-tone.’ With Project Pronto, SBC will lead the nation in speeding the widespread availability and meeting the demand for broadband and emerging broadband-powered services.”).

60. Indeed, far from acquiring market power, telephone companies have *lost* ground to their cable competitors in the broadband Internet access market. According to the FCC's August 9, 2001 report, *High Speed Services for Internet Access*, during the year 2000, cable companies added about 2.2 million cable modem lines, while telephone companies added about 1.6 million DSL lines. A Yankee Group report, issued in March 2001, shows an even larger cable modem advantage. According to that report, cable operators added 2.6 million cable modem lines in 2000, while DSL providers added only 1.3 million lines.⁸²

61. Moreover, during 2001, cable's advantage has been accelerating. According to Morgan Stanley Dean Witter, cable operators won 64 percent of new broadband subscribers in the second quarter of 2001, up from 59 percent during the first quarter.⁸³ A recent *Wall Street Journal* article, citing a study by Merrill Lynch, reported that in the second quarter of 2001, cable companies added 667,000 new customers, while DSL carriers added only 374,000 new subscribers.⁸⁴ Such evidence indicates that SBC is non-dominant in its provision of DSL service. SBC's market share of 32 percent is incompatible with a finding that SBC possesses market power in the mass-market broadband services market.

2. Demand Elasticities

62. An analysis of demand elasticities reinforces the conclusion that SBC is non-dominant in the mass-market broadband services market. In previous non-dominance orders, the Commission relied solely on indirect evidence of demand elasticity. For example, in the *AT&T*

82. YANKEE GROUP BROADBAND, *supra* note 40, at 3.

83. MORGAN STANLEY TELECOM, *supra* note 77, at 15. The report estimates that cable operators added 779,000 subscribers during the second quarter of 2001, compared with 432,000 new DSL subscribers. It does not take into account subscribers who chose other broadband platforms. Consequently, even fewer than 36 percent of new broadband lines were DSL. Morgan Stanley's estimate of 432,000 new DSL subscribers during the second quarter of 2001 is consistent with data from Telechoice, which estimates that 420,000 new DSL lines added during the second quarter of 2001. See *Communications Daily*, Aug. 14, 2001, at 6.

Reclassification Order, the Commission relied heavily on high churn rates in concluding that long-distance customers had highly price-elastic demand. It also cited its finding in the *AT&T Streamlining Order* that business customers had highly price-elastic demand based on evidence that business customers tend to be more sophisticated and knowledgeable purchasers of telecommunications services that are aware of the choices available to them and have no strong bias towards AT&T versus other interexchange carriers.

63. Here we present not only the type of indirect evidence of high demand elasticities upon which the Commission has relied in the past, but also direct *quantitative* evidence of the own-price elasticity of demand for mass-market broadband services. That quantitative evidence is derived from a study conducted in 2000 by Professors Paul Rappoport, Don Kridel, Lester Taylor, and Kevin Duffy-Demo. Using Marketing Science survey data for Internet use and TNS Telecoms survey data for broadband access availability and prices, Professors Rappoport, Kridel, Taylor, and Duffy-Demo calculated that the own-price elasticity of demand (the percentage change in demand for every one-percent increase in price) for DSL services is negative 1.462, which implies that for every one-percent increase in the price of DSL service, demand decreases by 1.462 percent.⁸⁵ That result suggests that demand for DSL service is, by definition, price-elastic.⁸⁶

64. Because the study by Professors Rappoport *et al.* was based on data from the first quarter of 2000, we decided to update it, using nearly the identical econometric model and data

84. Shawn Young, *How Do I Choose between Cable Modem and DSL?*, WALL ST. J., Sept. 10, 2001, at R15.

85. Paul Rappoport, Don Kridel, Lester Taylor & Kevin Duffy-Demo, *Residential Demand for Access to the Internet*, University of Arizona Working Paper, Spring 2001, at Table 10; *see also* Paul Rappoport, Don Kridel & Lester Taylor, *An Econometric Study of the Demand for Access to the Internet*, in *THE FUTURE OF THE TELECOMMUNICATIONS INDUSTRY: FORECASTING AND DEMAND ANALYSIS* (D.G. Loomis & L. D. Taylor eds., Kluwer Academic Publishers 1999).

from the fourth quarter of 2000 and the first quarter of 2001. In its quarterly survey, TNS Telecoms obtains detailed Internet usage data from approximately 3,500 respondents. Each respondent is asked, among other things, (1) whether DSL and/or cable modem access is available in his or her neighborhood, and (2) whether he or she subscribes to dial-up access or broadband access, and, if so, at what price. Respondents also supply socio-economic information concerning their income, race, occupation, and other characteristics that might influence the decision to purchase Internet services.

65. In the present application, standard regression analysis is not appropriate to estimate the consumer-choice model because the decision to purchase a broadband access technology is a binary (as opposed to continuous) variable. Hence, like Rappoport, *et al.*, we estimated a nested logit model, which allows us to examine the discrete choice across all Internet access alternatives, and the discrete choices within broadband-access alternatives. Details of the model are described in the Appendix. A brief description is provided here.

66. The model involves two stages in the estimation procedure. In the first stage, we assume that the customer chooses between no Internet access, narrowband Internet access, and broadband Internet access based on the following variables: (1) the customer's income, (2) the customer's gender, (3) the customer's age, and (4) the customer's education. In the second stage, conditional on choosing broadband Internet access, we assume that the customer chooses between cable modem and DSL services based on the prices of each service. Before estimating the model, we removed from the dataset any customer who did not have access to both cable modem and DSL services. The output from the regression model appears in the Appendix. Table 2 presents the updated elasticity estimates.

86. See, e.g., WILLIAM J. BAUMOL & ALAN S. BLINDER, MICROECONOMICS: PRINCIPLES AND POLICY

TABLE 2: OWN-PRICE AND CROSS-PRICE ELASTICITIES FOR DSL SERVICE

Service	Price of DSL	Price of Cable Modem
Choice: DSL	-1.184	0.415
Choice: Cable Modem	0.591	-1.220

Source: Criterion Economics, L.L.C.

As Table 2 shows, the own-price elasticity of DSL is still high (the comparable estimate from Rappoport *et al.* is -1.462), which suggests that demand for DSL service is price-elastic. Moreover, the cross-price elasticity of demand for cable modem with respect to a change in the price of DSL is high as well: for every 1 percent increase in the price of DSL service, the demand for cable modems rises by 0.591 percent. The comparable elasticity from Rappoport *et al.* was 0.766 percent. The high cross-price elasticity is further evidence that DSL and cable modems are in the same product market, and that DSL providers do not have market power.

67. This direct, quantitative evidence that the own-price elasticity of DSL is very high is corroborated by the type of indirect evidence on which the Commission has relied in the past. In the *AT&T Reclassification Order*, the Commission concluded that users of long-distance services had highly price-elastic demand based on evidence of high customer churn rates in the long-distance market. In particular, the Commission cited evidence submitted by AT&T that as many as 20 percent of its residential customers switched carriers at least once a year. The Commission found that “[t]his high churn rate among residential consumers . . . demonstrates that these customers find the services provided by AT&T and its competitors to be very close substitutes.”⁸⁷

68. The churn rate for SBC’s DSL service is well above those reported by AT&T. From January through July 2001, SBC’s churn rate was 5.7 percent monthly—almost three times

133 (Dryden Press 7th ed. 1994) (demand is elastic whenever “a rise in the price will decrease total revenue.”).

87. *AT&T Reclassification Order*, *supra* note 16, at 3305 ¶ 63. See also Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 254(g) of the Communications Act of 1934, CC Dkt. No. 96-61, 11 F.C.C. Rcd. 20,730, 20,743 ¶ 21 (1996).

the AT&T churn rate on which the FCC relied in concluding that customers of domestic, interstate interexchange services had highly price-elastic demand. Some of this churn is undoubtedly attributable to customers who do not leave SBC for a competitor. Nevertheless, the Commission considers churn to be a reasonable proxy for demand elasticity.

69. Other evidence underscores that DSL subscribers have highly price-elastic demand. First, the features that consumers most value from high-speed Internet access offerings are not unique to DSL service. As noted above, consumer surveys show that consumers who choose a broadband Internet access service do so primarily (1) to increase the speed of ordinary web surfing, (2) to take advantage of applications that require greater bandwidth, (3) to obtain an “always-on” connection, and (4) to free up their telephone line when they are using the Internet. All of these benefits are available not only from DSL, but also from cable modem and other broadband options. Surveys indicate that many consumers who are interested in broadband service are not predisposed towards cable or DSL service. They do not care about what platform they use to obtain broadband service; they want the features of a broadband connection.⁸⁸

70. Second, like business customers, users of high-speed Internet access services tend to be more sophisticated in their telecommunications purchases than the average consumer.⁸⁹ They are thus likely to be aware of their options and to consider alternatives before making a

88. YANKEE GROUP BROADBAND, *supra* note 40, at Exhibit 12. Among actual broadband users, there is some evidence that customers prefer cable modem service to DSL service. For example, a recent Forrester Research report found that cable modem service scored slightly higher than DSL service on each of six separate measures of quality, technical performance, and customer service. *See* FORRESTER STUDY, *supra* note 74, at Figure 1.2.

89. *See* YANKEE GROUP BROADBAND, *supra* note 40, at 7 (high-speed Internet access households tend to be wealthier, younger, and more technologically savvy); General Accounting Office Report, *Telecommunications, Characteristics and Choices of Internet Users*, Feb. 2001, at 12 (showing that Internet users tend to have a higher household income and more education than the general U.S. population).

choice of providers. The FCC found this consideration compelling in both the *AT&T Streamlining Order* and the *AT&T Reclassification Order*.⁹⁰

71. In short, econometric and qualitative evidence indicates that there is high price-elasticity of demand among DSL subscribers. This evidence also supports the conclusion that SBC is non-dominant in its provision of DSL services.

3. Supply Elasticities

72. A third consideration in determining SBC's non-dominant status is supply elasticity. In evaluating supply elasticity in its *AT&T Reclassification Order*, the FCC focused on two factors: (1) the capacity of existing competitors to expand supply and (2) low entry barriers for new suppliers.⁹¹ It concluded that AT&T's competitors "can add significant numbers of new customers with their existing capacity and add incrementally to this capacity as new customers are added to their networks."⁹²

73. The same is clearly true of SBC's competitors that provide mass-market broadband service. Those competitors could absorb immediately, and without additional investment, significant numbers of SBC's DSL subscribers and they could absorb SBC's entire customer base with little or no additional investment.

74. First, as discussed above, there are numerous providers of competitive mass-market broadband services throughout SBC's region. Two-thirds or more of the households in SBC's territory are served by cable facilities that are capable of providing broadband services. Yet the vast majority of this plant is not being used. Table 2 shows that, as of the end of 2000,

90. *AT&T Streamlining Order*, *supra* note 14, at 5887, ¶ 37; *AT&T Reclassification Order*, *supra* note 16, at 3306, ¶ 65.

91. *AT&T Reclassification Order*, *supra* note 16, at 3303 ¶ 57.

95.0 percent of U.S. homes that were upgraded for cable modem services and had not subscribed to the service.⁹³

TABLE 3: EXCESS CAPACITY IN CABLE MODEM SYSTEMS

Year	Households That Are Ready for Cable Modem Service (Millions)	Cable Modem Subscribers (Millions)	Excess Capacity*
1999	48.3	1.47	97.0%
2000	58.6	2.94	95.0%
2001	64.4	4.99	92.3%
2002	70.2	7.27	89.6%
2003	73.2	9.78	86.6%

Source: Available at http://www.emarketer.com/analysis/broadband/050800_cable.html.

Note: * Equal to 1 minus the ratio of cable modem subscribers to households that are cable-modem-ready.

This excess capacity indicates that cable operators alone could absorb most of SBC's DSL subscribers with only negligible additional dedicated or shared (downstream) investment. For those homes that are not yet cable-modem-ready, it is reasonable to believe that those homes could and would soon be wired, because the incremental cost of readying a home for cable modem service is estimated to be \$468 in 2001—a figure that pales in comparison to the expected revenues.⁹⁴ With respect to shared investment to alleviate congestion on the cable network,⁹⁵ we would expect that this cost, when *averaged* across all new subscribers, would be a much smaller component than the dedicated component.⁹⁶ Indeed, the congestion problem does not appear to be specific to any particular access technology.⁹⁷ It is therefore reasonable to

92. *Id.* at 3304 ¶ 60. AT&T had argued that its competitors could immediately absorb 15 percent of AT&T's switched traffic at no additional cost, and two-thirds of its switched traffic within one year at a cost of \$660 million. *Id.* at 3303-04 ¶ 59.

93. Available at http://www.emarketer.com/analysis/broadband/050800_cable.html.

94. JP MORGAN BROADBAND, *supra* note 40, at 70.

95. Because the design of a cable the network is a shared-bandwidth one, the more subscribers accessing the network and transmitting data, the more congestion arises across the entire network. *See, e.g., DSL v. Cable: An Internet Boxing Match*, COMM. NEWS, Feb. 1, 2001, at 63.

96. The detailed cost analyses that we have reviewed make no mention of the shared component when demonstrating the business case for cable modem service.

97. According to *Network Computing*, the real bottleneck exists at the back-end servers providing content, not in the customer's immediate vicinity: "Both DSL and cable can use content-delivery-network

believe that such costs would not preclude a cable modem provider from accommodating SBC's DSL customers. In the terminology of the U.S. Court of Appeals for the D.C. Circuit, SBC's competitors would face an attractive investment-to-revenue ratio.⁹⁸

75. Of course, the Commission need not rely on cost estimates to conclude that cable operators can readily expand their capacity. The rapid rate at which they are upgrading their networks speaks for itself. Between the second quarter of 2000 and the second quarter of 2001, an additional 18 million cable homes were upgraded for two-way capability—expanding the availability of cable modem service from 48 million homes to over 60 million homes.⁹⁹ Assuming, based on SBC's share of access lines nationwide, that one-third of those upgrades took place in the SBC region, then, under current deployment schedules, cable operators could, within one year, expand their reach to nearly 6 million new subscriber homes in the SBC region—5.5 times SBC's current DSL customer base.¹⁰⁰

76. Equally telling is the rate at which cable modem providers are adding subscribers. Despite a recent slowing of growth, the five largest cable operators added more than 600,000 cable modem subscribers during the second quarter of 2001, according to Warren Communications News' Telecom Research Group.¹⁰¹ Thus, again assuming that one-third (200,000) of these new cable modem subscribers were in SBC's territory, these five cable

techniques, like caching, content replication and multicast, to improve performance. Here, neither has the advantage." David Willis, *Cable's Edge*, NETWORK COMPUTING, Aug. 20, 2001, at 35.

98. See *AT&T Corp. v. FCC*, 236 F.3d 729, 733 (D.C. Cir. 2001).

99. MORGAN STANLEY TELECOM, *supra* note 77, at 9, Exhibit 5.

100. During the second quarter of 2001, cable facilities serving 3.9 million households were upgraded so that they were capable of providing cable modem service. See *Market Researchers Erred in Predictions on DSL vs. Cable Modems*, 21 COMM. DAILY, Aug. 15, 2001, available at 2001 WL 5053831 (citing a February 2001 study by TeleChoice measuring 3.9 million cable-ready households). Assuming, again, that one-third of those upgrades were in SBC territory, the 1.3 million additional lines could more than accommodate all of SBC's existing DSL subscribers.

101. *TW Cable Tops AT&T as Biggest High-Speed Provider, Study Shows*, COMM. DAILY, Aug. 17, 2001 at 2.

operators added *in one quarter* a number of customers that is equivalent to 18 percent of SBC's total DSL customer base.

4. Cost Structure, Size, and Resources

77. Another set of considerations that the FCC factors into its non-dominance analysis is whether the firm at issue has market power by virtue of having greater resources, size, financial strength, and a more favorable cost structure.¹⁰² As the FCC has twice noted, the question is not whether the firm at issue has advantages in the relevant market, but “whether any such advantages are so great to preclude the effective functioning of a competitive market.”¹⁰³ Indeed, as the FCC recognized, “the competitive process itself is largely about trying to develop one’s own advantages, and all firms need not be equal in all respects for this process to work.”¹⁰⁴

78. With respect to the market for high-speed Internet access services, SBC does not enjoy any advantages over its competitors with respect to size, resources, financial strength, and cost structure. SBC certainly does not have advantages that are “so great [that they] preclude the effective functioning of a competitive market.”¹⁰⁵

79. SBC competes in its provision of mass-market broadband services against, among others, the following multiple system operators (MSOs) with the following market capitalizations: AOL Time Warner (\$147.1 billion), AT&T Corp. (\$68.2 billion), Comcast Corp. (\$33.9 billion), Cox Communications, Inc. (\$25.1 billion), and Cablevision Systems Corp. (\$7.2

102. See *AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73.

103. *Id.* (citing *First Interexchange Competition Order*, 6 F.C.C. Rcd. at 5891-92). See also *AT&T Streamlining Order*, *supra* note 14, at 5901 n.187; *COMSAT Non-Dominance Order*, *supra* note 19, at 14,130-32 ¶¶ 92-93 (agreeing that COMSAT’s size and resources gave it significant competitive advantages but forbearing, nevertheless, from dominant carrier regulation of COMSAT).

104. *AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73; *AT&T Streamlining Order*, *supra* note 14, at 5901 n.189.

105. *AT&T Reclassification Order*, *supra* note 16, at 3309 ¶ 73.

billion).¹⁰⁶ Under no stretch of the imagination could these MSOs be called fledgling competitors that lack the size, resources, or financial stability to compete with SBC. Indeed, the rate at which cable operators are upgrading their cable facilities in itself belies any such claim.

80. Nor does SBC enjoy cost advantages vis-à-vis its competitors that effectively preclude competition. To the contrary, SBC faces cost *disadvantages* relative to its cable competitors. According to analyst reports, the costs of deploying DSL service exceed the cost of deploying cable modem service. For example, JP Morgan and McKinsey & Company conclude that the average cost per customer of a large ILEC undertaking a massive DSL deployment is currently \$86 per month per customer.¹⁰⁷ That cost, they conclude, will decline by 2005 to \$38 per month per customer. In contrast, the average, per-customer cost of providing cable modem service is estimated to be \$55, declining by 2005 to \$30.¹⁰⁸ At no point during the next five years is the average cost of providing DSL service expected to be less than the average cost of providing cable modem service. To the contrary, the costs of cable modem providers are projected to remain substantially lower throughout that period. The conclusion by JP Morgan and McKinsey that cable modem costs are lower than DSL costs is echoed in an August 2001 report issued by the Yankee Group, which predicted: "Cable modem prices are likely to remain cheaper than DSL prices for comparable service levels due mainly to the low service provision costs on the part of MSOs."¹⁰⁹

81. In addition to facing the other obstacles, described above, DSL providers face significant technological constraints. DSL cannot reach customers whose copper loops exceed

106. Downloaded from www.yahoo.com on Sept. 28, 2001.

107. JP MORGAN BROADBAND, *supra* note 40, at Chart 45.

108. *Id.* at Chart 46.

109. YANKEE GROUP BROADBAND, *supra* note 40, at 4.

18,000 feet from the service point,¹¹⁰ and the cost of deploying service to customers whose loops are routed through digital loop carriers far exceeds the cost of reaching customers with all-copper loops. Although cable operators face their own constraints due to their service architecture, they do not face distance limitations that significantly impair their ability to reach large numbers of customers.

82. The advantages enjoyed by cable operators are magnified by the asymmetric regulation of DSL and cable modem services. As stated by SBC and BellSouth in their joint comments in the *Cable Open Access* proceeding:

Telephone companies have to “unbundle” the wireline spectrum that they use for broadband . . . and make it available to all comers at regulated prices. Cable companies do not. Telephone companies must permit their competitors to “collocate” equipment in telephone company premises to make it easier to use that “unbundled” spectrum. Cable companies do not. Telephone companies are almost completely locked-out of the multi-billion dollar (and rapidly expanding) Internet backbone service. Cable companies are not. Telephone companies must offer their retail broadband transmission services to competitors at a federally mandated discount. Cable companies do not. Telephone companies must pay-in to universal service when they provide broadband access. Cable companies do not. And telephone companies have been forced to carve-out their broadband transmission services into a separate affiliate as a condition to gaining regulatory approval of recent mergers. Cable companies have not.¹¹¹

But the disparity between incumbent LECs and cable operators is not limited to the treatment of their broadband services. Incumbent LECs are highly regulated in their provision of telephone exchange and exchange access service. Cable service, in contrast, is largely deregulated.¹¹²

83. In short, no credible argument can be made that SBC enjoys advantages in the provision of high-speed Internet access services, much less that it has advantages that effectively preclude the functioning of that market. The real issue is whether the very opposite is true: Are

110. See Drew Robb, *DSL: Don't Tread on Me*, 31 BUS. COMM. REV. 5861, May 1, 2001.

111. Comments of SBC Communications Inc. and BellSouth Corp., GN Dkt. No. 00-185, Dec. 1, 2000, at 6-7.

112. See, e.g., ROBERT W. CRANDALL & HAROLD FURCHTGOTT-ROTH, *CABLE TV: REGULATION OR COMPETITION?* (Brookings Institution 1996).